

# Sequence Listing

<110> Baker, Kevin  
 Botstein, David  
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 Filvaroff, Ellen  
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 Goddard, Audrey  
 Godowski, Paul  
 Grimaldi, Christopher  
 Gurney, Austin  
 Hillan, Kenneth  
 Kljavin, Ivar  
 Napier, Mary  
 Roy, Margaret  
 Tumas, Daniel  
 Wood, William

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Thr Val Leu Cys His Met Ala Gly Leu Gln Pro Gly Gly His Thr		
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Arg	Gln	Leu	Gln	Pro	Val	Pro	Ala	Thr		Gln	Glu	Pro	Asp	Lys	Ile				
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Leu	Pro	Arg	Ser	Gln	Ala	Thr	Val	Thr		Leu	Pro	Thr	Trp	Gln	Pro				
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Lys	Thr	Gly	Gln	Lys	Val	Val	Glu	Met		Lys	Trp	Asp	Gln	Val	Glu				
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Val	Ile	Pro	Asp	Ile	Ala	Cys	Gly	Asn		Ala	Ser	Ser	Asn	Ser	Ser				
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Arg	Ser	Val	Thr	Pro	Leu	Gln	Ala	Ser		Gly	Gly	Leu	Val	Leu	Leu				
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Glu	Glu	Met	Leu	Ala	Leu	Gly	Asn	Asn		His	Phe	Ile	Gly	Phe	Val				
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Asn	Asp	Ser	Val	Thr	Lys	Ser	Ile	Val		Ala	Leu	Arg	Leu	Thr	Leu				
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Val	Val	Lys	Val	Ser	Thr	Cys	Val	Pro		Gly	Glu	Ser	His	Ala	Asn				
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Asp	Leu	Glu	Cys	Ser	Gly	Lys	Gly	Lys		Cys	Thr	Thr	Lys	Pro	Ser				
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Glu	Ala	Thr	Phe	Ser	Cys	Thr	Cys	Glu		Glu	Gln	Tyr	Val	Gly	Thr				
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Ser	Lys	Ile	Asp	Tyr	Cys	Ile	Leu	Asp		Pro	Cys	Arg	Asn	Gly	Ala				
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Gly Tyr Phe Gly	Ser Ala Cys Glu Glu	Lys Val Asp Pro Cys Ala	425	430	435
Ser Ser Pro Cys	Gln Asn Asn Gly Thr	Cys Tyr Val Asp Gly Val	440	445	450
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Ala Gln Leu Ile	Asp Phe Cys Ala Leu	Ser Pro Cys Ala His Gly	470	475	480
Thr Cys Arg Ser	Val Gly Thr Ser Tyr	Lys Cys Leu Cys Asp Pro	485	490	495
Gly Tyr His Gly	Leu Tyr Cys Glu Glu	Glu Tyr Asn Glu Cys Leu	500	505	510
Ser Ala Pro Cys	Leu Asn Ala Ala Thr	Cys Arg Asp Leu Val Asn	515	520	525
Gly Tyr Glu Cys	Val Cys Leu Ala Glu	Tyr Lys Gly Thr His Cys	530	535	540
Glu Leu Tyr Lys	Asp Pro Cys Ala Asn	Val Ser Cys Leu Asn Gly	545	550	555
Ala Thr Cys Asp	Ser Asp Gly Leu Asn	Gly Thr Cys Ile Cys Ala	560	565	570
Pro Gly Phe Thr	Gly Glu Glu Cys Asp	Ile Asp Ile Asn Glu Cys	575	580	585
Asp Ser Asn Pro	Cys His His Gly Gly	Ser Cys Leu Asp Gln Pro	590	595	600
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Leu Thr Asn Met	Pro Arg His Ser Leu	Tyr Ile Ile Ile Gly Ala	635	640	645
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Ile Cys Arg Ile	Ser Arg Ile Glu Tyr	Gln Gly Ser Ser Arg Pro	665	670	675
Ala Tyr Glu Glu	Phe Tyr Asn Cys Arg	Ser Ile Asp Ser Glu Phe	680	685	690
Ser Asn Ala Ile	Ala Ser Ile Arg His	Ala Arg Phe Gly Lys Lys			

695

700

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tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggatgaagg 200  
cagcacctgt gtgccggggg agagtacgc aaatgacttg gagggttcag 250  
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aagatgggag caatttcacc tgtgtttgcc ttctgggtta tactggagag 450  
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0904457-083004

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Asp	Ala	Leu	Arg	Leu	Thr	Leu	Glu	Gln	Ile	Asp	Leu	Ile	Arg	Arg	
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Thr	Pro	Trp	Ala	Glu	Ser	Ser	Ala	Lys	Gly	Val	His	Ser	Phe	Tyr	
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Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser	200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val	215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg	230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly	245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro	260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys	275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp	290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr	305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu	320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg	335	340	345
Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu	350	355	360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser	365	370	375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln	380	385	390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala	395	400	405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Met Ala Pro Val Leu	410	415	420
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gagcagattg acctcatagc ccgcatgtgt gcctcctatt ctgagctgga 50

<210> 29  
<211> 1416  
<212> DNA  
<213> Homo Sapien

<400> 29  
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gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgccct 200  
ggtcctaagg caggtttacc agaaagggt acaggatgtt aacctgcgca 250  
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgtg 300  
ggcgcccagt tctggtcagc ctatgtgccca tgccagaccc aggaccggga 350  
tgccctgcgc ctcacctgg agcagattga cctcatagc ccgcatgtgtg 400

cctcctattc tgagctggag cttgtgacct cggctaaagc tctgaacgac 450  
 actcagaaat tggcctgcct catcggtgta gaggggtggcc actcgctgga 500  
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550  
 tgacgctcac ccacacctgc aacacaccct gggcagagag ctccgctaag 600  
 ggcgtccact cttctacaa caacatcagc gggctgactg actttggtga 650  
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 tgggtgtcttt gtccatggga gtaatacagt gcaaccatc agccaatgtg 900  
 tccactgtgg cagatcactt cgaccacatc aaggctgtca ttggatccaa 950  
 gttcatcggg attggtggag attatgatgg ggccggcaaa ttcctcagg 1000  
 ggctggaaga cgtgtccaca taccgggtcc tgatagagga gttgctgagt 1050  
 cgtggctgga gtgaggaaga gcttcagggt gtccttcgtg gaaacctgct 1100  
 gcgggtcttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150  
 gccccttga ggacaagtcc ccgatgagc agctgagcag ttcctgccac 1200  
 tccgacctct cacgtctgcy tcagagacag agtetgactt caggccagga 1250  
 actcactgag attcccatc actggacagc caagttacca gccaaagtgg 1300  
 cagtctcaga gtctccccc caccctgaca aaactcacac atgcccaccg 1350  
 tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccc 1400  
 aaaacccaag gacacc 1416

<210> 30  
 <211> 446  
 <212> PRT  
 <213> Homo Sapien

<400> 30  
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 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln  
 35 40 45  
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

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Tyr	Gly	Gln	Thr	Ser	Leu	Asp	Arg	Leu	Arg	Asp	Gly	Leu	Val	Gly		
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Ala	Gln	Phe	Trp	Ser	Ala	Tyr	Val	Pro	Cys	Gln	Thr	Gln	Asp	Arg		
				80					85					90		
Asp	Ala	Leu	Arg	Leu	Thr	Leu	Glu	Gln	Ile	Asp	Leu	Ile	Arg	Arg		
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Met	Cys	Ala	Ser	Tyr	Ser	Glu	Leu	Glu	Leu	Val	Thr	Ser	Ala	Lys		
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Ala	Leu	Asn	Asp	Thr	Gln	Lys	Leu	Ala	Cys	Leu	Ile	Gly	Val	Glu		
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Gly	Gly	His	Ser	Leu	Asp	Asn	Ser	Leu	Ser	Ile	Leu	Arg	Thr	Phe		
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Tyr	Met	Leu	Gly	Val	Arg	Tyr	Leu	Thr	Leu	Thr	His	Thr	Cys	Asn		
				155					160					165		
Thr	Pro	Trp	Ala	Glu	Ser	Ser	Ala	Lys	Gly	Val	His	Ser	Phe	Tyr		
				170					175					180		
Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala		
				185					190					195		
Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser		
				200					205					210		
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val		
				215					220					225		
Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg		
				230					235					240		
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly		
				245					250					255		
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro		
				260					265					270		
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys		
				275					280					285		
Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp		
				290					295					300		
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr		
				305					310					315		
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu		
				320					325					330		
Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg		
				335					340					345		

Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu  
 350 355 360  
 Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser  
 365 370 375  
 Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln  
 380 385 390  
 Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala  
 395 400 405  
 Lys Trp Ser Val Ser Glu Ser Ser Pro His Pro Asp Lys Thr His  
 410 415 420  
 Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser  
 425 430 435  
 Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
 440 445

<210> 31  
 <211> 1790  
 <212> DNA  
 <213> Homo Sapien

<400> 31  
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 cccggcagcg ccggcccccatt gccgcgcggc cgccggggcc ccgcgcgccca 150  
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 agtgcacgga gaccaccag gagccaccgc cgagggcctc tactggaccc 350  
 tcaacgggcg ccgctgccc cctgagctct cccgtgtact caacgcctcc 400  
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 ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctcct 500  
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0994457.083004

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 gtgagtggag ccaccccaca gccgcctcca ctccccgcag tgagcgcccg 1150  
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 gccggtgcgg cgcgagctca agcagttcct gggctggctc aagaagcacg 1250  
 cgtactgtc caacctcagc ttccgcctct acgaccagtg gcgagcctgg 1300  
 atgcagaagt cgcacaagac ccgcaaccag gacgagggga tcctgccctc 1350  
 gggcagacgg ggcacggcga gaggtcctgc cagataagct gtaggggctc 1400  
 aggccaccct ccctgccacg tggagacgca gaggccgaac ccaaactggg 1450  
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 tggttgagtt gcctagaacc cctgccaggg ctgggggtga gaaggggagt 1650  
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 aaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

<210> 32  
 <211> 422  
 <212> PRT  
 <213> Homo Sapien

<400> 32  
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                     20                    25                    30  
 Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro  
                     35                    40                    45  
 Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys  
                     50                    55                    60

Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr  
 65 70 75  
 Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val  
 80 85 90  
 Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Ala Asn Leu Asn Gly  
 95 100 105  
 Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp  
 110 115 120  
 Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro  
 125 130 135  
 Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp  
 140 145 150  
 Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu  
 155 160 165  
 His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln  
 170 175 180  
 Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys  
 185 190 195  
 His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp  
 200 205 210  
 Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu  
 215 220 225  
 Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp  
 230 235 240  
 Val His Val Ser Arg Val Gly Gly Leu Glu Asp Gln Leu Ser Val  
 245 250 255  
 Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala  
 260 265 270  
 Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys  
 275 280 285  
 Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly  
 290 295 300  
 Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro  
 305 310 315  
 Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp  
 320 325 330  
 Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly  
 335 340 345  
 Pro Gly Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser

350	355	360
Gly Pro Val Arg	Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys	
365	370	375
Lys His Ala Tyr	Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln	
380	385	390
Trp Arg Ala Trp	Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp	
395	400	405
Glu Gly Ile Leu	Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro	
410	415	420

Ala Arg

<210> 33  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 33  
 cccgcccgcac gtgcacgtga gcc 23

<210> 34  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 34  
 tgagccagcc caggaactgc ttg 23

<210> 35  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 35  
 caagtgcgct gcaacccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36  
 <211> 1771  
 <212> DNA  
 <213> Homo Sapien

<400> 36  
 cccacgcgctc cgctggtggtt agatcgagca accctctaaa agcagtttag 50

0944157 033001

agtggtaaaa aaaaaaaaaa acacaccaa cgctcgagc cacaaaagg 100  
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gccactctgt ttctgagag atacctcaca ttccaatgcc aaacatttct 1550
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<210> 37
<211> 300
<212> PRT
<213> Homo Sapien
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215	220	225
Ile Lys Asn Pro Ser Thr Ser Leu Gly	Pro Thr Leu Glu Pro Glu	
230	235	240
Glu Val Val Asn Arg Leu Met His Gly	Ile Leu Thr Glu Gln Lys	
245	250	255
Met Ile Phe Ile Pro Ser Ser Ile Ala	Phe Leu Thr Thr Leu Glu	
260	265	270
Arg Ile Leu Pro Glu Arg Phe Leu Ala	Val Leu Lys Arg Lys Ile	
275	280	285
Ser Val Lys Phe Asp Ala Val Ile Gly	Tyr Lys Met Lys Ala Gln	
290	295	300

<210> 38  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
 ggtgaaggca gaaattggag atg 23

<210> 39  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 39  
 atcccatgca tcagcctggt tacc 24

<210> 40  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 40  
 gctgggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41  
 <211> 1377  
 <212> DNA  
 <213> Homo Sapien

<400> 41  
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 gaaccaggac tggggtgacg gcagggcagg gggcgccctgg ccggggagaa 100  
 gcgcgggggc tggagacca ccaactggag ggtccggagt agcgagcgcc 150  
 ccgaaggagg ccatcgggga gccgggaggg gggactgcga gaggaccccg 200  
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 cagcctctgc ccggggcacc ccggccttcc aggcacgccg ggccaccatg 350  
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 gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750  
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<210> 42

<211> 243  
 <212> PRT  
 <213> Homo Sapien

<400> 42

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His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly
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Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly
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Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly
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Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly
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Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala
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Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp
				110					115					120
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His
				125					130					135
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val
				140					145					150
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln
				155					160					165
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln
				170					175					180
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala
				185					190					195
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly
				200					205					210
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser
				215					220					225
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro
				230					235					240
Val	Phe	Ala												

<210> 43  
 <211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
tacaggccca gtcaggacca gggg 24

<210> 44  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
agccagcctc gctctcgg 18

<210> 45  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
gtctgcgatc aggtctgg 18

<210> 46  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 46  
gaaagaggca atggattcgc 20

<210> 47  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 47  
gacttacact tgccagcaca gcac 24

<210> 48  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 48  
ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49  
<211> 1876  
<212> DNA  
<213> Homo Sapien

<400> 49  
ctcttttgtc caccagccca gctgactcc tggagattgt gaatagctcc 50  
atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100  
acctgacggg cccaacagac ccattgtgca tccagagacc tcccctggcc 150  
gggggcatct cctggctgtg ctccctggccc tccttggcac cacctgggca 200  
gaggtgtggc caccacagct gcaggagcag gctccgatgg ccggagccct 250  
gaacaggaag gagagtttct tgctcctctc cctgcacaac cgcttgcgca 300  
gctgggtcca gccccctgcg gctgacatgc ggaggctgga ctggagtga 350  
agcctggccc aactggtca agccaggga gccctctgtg gaatcccaac 400  
cccagcctg gcatccggcc tgtggcgcac cctgcaagtg ggctggaaca 450  
tgcagctgct gcccgcgggc ttggcgctct ttgttgaagt ggtcagccta 500  
tggtttgcag aggggcagcg gtacagccac gcggcaggag agtgtgctcg 550  
caacgccacc tgcaccact acacgcagct cgtgtgggccc acctcaagcc 600  
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gccaagtga gtcagcctg cagtgtgtgc acggccgggt ccgggaggag 950  
gagtgtcgt gcgtctgtga catcggtac gggggagccc agtgtgccac 1000  
caaggtgcat ttcccttcc acacctgtga cctgaggatc gacggagact 1050  
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tgtcagagga aaggcggggg gctggcccag atcaagagcc agaaagtga 1150

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00944457.083004

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 accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300  
 cagttttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350  
 ctgccatggg gtttggcaac tgcgtggagc tgcaggcttc agctgccttc 1400  
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 catggctccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550  
 ccacctgtct ggaacaaggg ccaggttaag accacatgcc tcatgtccaa 1600  
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650  
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700  
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750  
 acaccgccag tgggtccaaa aggtctctct cttccacctg gccagaccc 1800  
 tgtggggcag cggagcttcc ctgtggcatg aacccacgg ggtattaaat 1850  
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50  
 <211> 455  
 <212> PRT  
 <213> Homo Sapien

<400> 50  
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala  
 1 5 10 15  
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 20 25 30  
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg  
 35 40 45  
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser  
 50 55 60  
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser  
 65 70 75  
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly  
 80 85 90  
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln  
 95 100 105  
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

110										115					120					
Val	Glu	Val	Val	Ser	Leu	Trp	Phe	Ala	Glu	Gly	Gln	Arg	Tyr	Ser						
				125					130					135						
His	Ala	Ala	Gly	Glu	Cys	Ala	Arg	Asn	Ala	Thr	Cys	Thr	His	Tyr						
				140					145					150						
Thr	Gln	Leu	Val	Trp	Ala	Thr	Ser	Ser	Gln	Leu	Gly	Cys	Gly	Arg						
				155					160					165						
His	Leu	Cys	Ser	Ala	Gly	Gln	Thr	Ala	Ile	Glu	Ala	Phe	Val	Cys						
				170					175					180						
Ala	Tyr	Ser	Pro	Gly	Gly	Asn	Trp	Glu	Val	Asn	Gly	Lys	Thr	Ile						
				185					190					195						
Ile	Pro	Tyr	Lys	Lys	Gly	Ala	Trp	Cys	Ser	Leu	Cys	Thr	Ala	Ser						
				200					205					210						
Val	Ser	Gly	Cys	Phe	Lys	Ala	Trp	Asp	His	Ala	Gly	Gly	Leu	Cys						
				215					220					225						
Glu	Val	Pro	Arg	Asn	Pro	Cys	Arg	Met	Ser	Cys	Gln	Asn	His	Gly						
				230					235					240						
Arg	Leu	Asn	Ile	Ser	Thr	Cys	His	Cys	His	Cys	Pro	Pro	Gly	Tyr						
				245					250					255						
Thr	Gly	Arg	Tyr	Cys	Gln	Val	Arg	Cys	Ser	Leu	Gln	Cys	Val	His						
				260					265					270						
Gly	Arg	Phe	Arg	Glu	Glu	Glu	Cys	Ser	Cys	Val	Cys	Asp	Ile	Gly						
				275					280					285						
Tyr	Gly	Gly	Ala	Gln	Cys	Ala	Thr	Lys	Val	His	Phe	Pro	Phe	His						
				290					295					300						
Thr	Cys	Asp	Leu	Arg	Ile	Asp	Gly	Asp	Cys	Phe	Met	Val	Ser	Ser						
				305					310					315						
Glu	Ala	Asp	Thr	Tyr	Tyr	Arg	Ala	Arg	Met	Lys	Cys	Gln	Arg	Lys						
				320					325					330						
Gly	Gly	Val	Leu	Ala	Gln	Ile	Lys	Ser	Gln	Lys	Val	Gln	Asp	Ile						
				335					340					345						
Leu	Ala	Phe	Tyr	Leu	Gly	Arg	Leu	Glu	Thr	Thr	Asn	Glu	Val	Thr						
				350					355					360						
Asp	Ser	Asp	Phe	Glu	Thr	Arg	Asn	Phe	Trp	Ile	Gly	Leu	Thr	Tyr						
				365					370					375						
Lys	Thr	Ala	Lys	Asp	Ser	Phe	Arg	Trp	Ala	Thr	Gly	Glu	His	Gln						

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu  
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr  
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg  
440 445 450

Trp Gly Pro Gly Ser  
455

<210> 51  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 51  
aggaacttct ggatcgggct cacc 24

<210> 52  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 52  
gggtctgggc caggtggaag agag 24

<210> 53  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 53  
gccaaggact ccttccgctg ggccacaggg gagcaccagg ccttc 45

<210> 54  
<211> 2331  
<212> DNA  
<213> Homo Sapien

<400> 54  
cggacgcgtg ggctgggctg tgcaaagcgt gtcccgccgg gtccccgagc 50  
gtcccgccgc ctcgccccgc catgctcctg ctgctggggc tgtgcctggg 100  
gctgtccctg tgtgtggggc cgcaggaaga ggcgcagagc tggggccact 150  
cttcggagca ggatggactc aggggtcccga ggcaagtcag actgttgagc 200

aggtgaaaa ccaaacttt gatgacagaa ttctcagtga agtctacat 250  
 ctttcccgt tatgccttca ctacggttcc ctgcagaatg ctgaacagag 300  
 cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350  
 ttcatcacca acttcactat gcttattgga gacaaggtgt atcagggcga 400  
 aattacagag agagaaaaga agagtgggtga tagggtaaaa gagaaaagga 450  
 ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500  
 tctgcagtga ttcccagcaa ggacaaagcc gcctttttcc tgagttatga 550  
 ggagcttctg cagaggcgcc tgggcaagta cgagcacagc atcagcgtgc 600  
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 agcgcgggca tgcctccct ggaggtgctg ccgcttcaca acagcaggca 700  
 gaggggagct gggcgcgggg aagatgattc tgggcctccc ccactactg 750  
 tcattaacca aaatgaaaca ttgccaaca taatttttaa acctactgta 800  
 gtacaacaag ccaggattgc ccagaatgga attttgggag actttatcat 850  
 tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900  
 atggctatct tgtgcactac ttgtctcta aagaccttc tcttttacc 950  
 aagaatgtgg tattcgtgct tgacagcagt gcttctatgg tgggaaccaa 1000  
 actccggcag accaaggatg ccctcttcac aattctccat gacctccgac 1050  
 cccaggaccg tttcagtatc attggatttt ccaaccggat caaagtatgg 1100  
 aaggaccact tgatatcagt cactccagac agcatcaggg atgggaaagt 1150  
 gtacattcac catatgtcac ccactggagg cacagacatc aacggggccc 1200  
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 ggagaccgga gcgtgtccct catcgtcttc ctgacggatg ggaagcccac 1300  
 ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350  
 cccgaggcca agtctgcac ttaccattg gcatcggcaa cgacgtggac 1400  
 ttcaggctgc tggagaaact gtcgtggag aactgtggc tcacacggcg 1450  
 cgtgcacgag gaggaggacg caggctcgca gctcatcggg ttctacgatg 1500  
 aaatcaggac cccgtctctc tctgacatcc gcatcgatta tccccagc 1550  
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 ggagatcatc attgcgggga agctggtgga caggaagctg gatcacctgc 1650

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caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800  
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gatgaaccgg agaaggagcg gctgcggcag cgggccagg ccttggtgt 1900  
gagctaccgc ttctcactc cttcacctc catgaagctg agggggccgg 1950  
tcccacgcat ggatggcctg gaggaggccc acggcatgtc ggctgccatg 2000  
ggaccggaac cggtggtgca gagcgtgca ggagctggca cgcagccagg 2050  
acctttgtc aagaagccaa actccgtcaa aaaaaaaca aacaaaaca 2100  
aaaaagaca tgggagagat ggtgttttct ctctccacca cctggggata 2150  
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200  
ccatgtctgc tggcaccttg atcttgacc tccagcctc cagaactgtg 2250  
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaa aaaaaaaaa 2300  
aaaaaaaaa aaaaaaaaa aaaaaaaaa a 2331

<210> 55  
<211> 694  
<212> PRT  
<213> Homo Sapien

<400> 55  
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val  
1 5 10 15  
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln  
20 25 30  
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu  
35 40 45  
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile  
50 55 60  
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn  
65 70 75  
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro  
80 85 90  
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys  
95 100 105  
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp  
110 115 120

[illegible]

[illegible]

<210> 56  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 56  
gtgggaacca aactccggca gacc 24

<210> 57  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 57  
cacatcgagc gtctctgg 18

<210> 58  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 58  
agccgctcct tctccggttc atcg 24

<210> 59  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 59  
tggaaggacc acttgatatc agtcactcca gacagcatca gggatggg 48

<210> 60  
<211> 1413  
<212> DNA  
<213> Homo Sapien

<400> 60  
cggacgcgtg gggtgcccga catggcgagt gtagtgctgc cgagcggatc 50  
ccagtgtgcg gcggcagcgg cggcggcggc gcctcccggg ctccggcttc 100  
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150  
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

[illegible]

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				20					25						30
Phe	Ser	Ala	Ala	Ala	Leu	Ile	Pro	Thr	Gly	Asp	Gly	Gln	Asn	Leu	
				35					40						45
Phe	Thr	Lys	Asp	Val	Thr	Val	Ile	Glu	Gly	Glu	Val	Ala	Thr	Ile	
				50					55						60
Ser	Cys	Gln	Val	Asn	Lys	Ser	Asp	Asp	Ser	Val	Ile	Gln	Leu	Leu	
				65					70						75
Asn	Pro	Asn	Arg	Gln	Thr	Ile	Tyr	Phe	Arg	Asp	Phe	Arg	Pro	Leu	
				80					85						90
Lys	Asp	Ser	Arg	Phe	Gln	Leu	Leu	Asn	Phe	Ser	Ser	Ser	Glu	Leu	
				95					100						105
Lys	Val	Ser	Leu	Thr	Asn	Val	Ser	Ile	Ser	Asp	Glu	Gly	Arg	Tyr	
				110					115						120
Phe	Cys	Gln	Leu	Tyr	Thr	Asp	Pro	Pro	Gln	Glu	Ser	Tyr	Thr	Thr	
				125					130						135
Ile	Thr	Val	Leu	Val	Pro	Pro	Arg	Asn	Leu	Met	Ile	Asp	Ile	Gln	
				140					145						150
Lys	Asp	Thr	Ala	Val	Glu	Gly	Glu	Glu	Ile	Glu	Val	Asn	Cys	Thr	
				155					160						165
Ala	Met	Ala	Ser	Lys	Pro	Ala	Thr	Thr	Ile	Arg	Trp	Phe	Lys	Gly	
				170					175						180
Asn	Thr	Glu	Leu	Lys	Gly	Lys	Ser	Glu	Val	Glu	Glu	Trp	Ser	Asp	
				185					190						195
Met	Tyr	Thr	Val	Thr	Ser	Gln	Leu	Met	Leu	Lys	Val	His	Lys	Glu	
				200					205						210
Asp	Asp	Gly	Val	Pro	Val	Ile	Cys	Gln	Val	Glu	His	Pro	Ala	Val	
				215					220						225
Thr	Gly	Asn	Leu	Gln	Thr	Gln	Arg	Tyr	Leu	Glu	Val	Gln	Tyr	Lys	
				230					235						240
Pro	Gln	Val	His	Ile	Gln	Met	Thr	Tyr	Pro	Leu	Gln	Gly	Leu	Thr	
				245					250						255
Arg	Glu	Gly	Asp	Ala	Leu	Glu	Leu	Thr	Cys	Glu	Ala	Ile	Gly	Lys	
				260					265						270
Pro	Gln	Pro	Val	Met	Val	Thr	Trp	Val	Arg	Val	Asp	Asp	Glu	Met	
				275					280						285
Pro	Gln	His	Ala	Val	Leu	Ser	Gly	Pro	Asn	Leu	Phe	Ile	Asn	Asn	
				290					295						300
Leu	Asn	Lys	Thr	Asp	Asn	Gly	Thr	Tyr	Arg	Cys	Glu	Ala	Ser	Asn	

[illegible]

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<210> 62
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Synthetic oligonucleotide probe

```
<400> 62
ggcttctgct gttgctcttc tccg 24
```

```
<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Synthetic oligonucleotide probe

```
<400> 63
  qtacactgtg accagtcagc 20
```

```
<210> 64
<211> 20
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Synthetic oligonucleotide probe

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<220>  
<223> Synthetic oligonucleotide probe

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<210> 66
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Synthetic oligonucleotide probe

```
<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Synthetic oligonucleotide probe

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<400> 67
cgcggcactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50
```

```
<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien
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49

gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450  
 cctcctggcc ctggagcccc gcatectgga cactgccaac gtggaggcgc 500  
 tgcggttggc tggctctggg ctgcagcagc tggacgaggg gctcttcagc 550  
 cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600  
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 gcaacccctt caactgcgtg tgcacctga gctggtttg cccctgggtg 850  
 cgcgagagcc acgtcacact ggccagccct gaggagacgc gctgccactt 900  
 cccgccaag aacgtggcc ggtgctcct ggagcttgac tacgccgact 950  
 ttggtgccc agccaccacc accacagcca cagtgccac cacgaggccc 1000  
 gtggtgcggg agcccacagc cttgtcttct agcttggtc ctacctggt 1050  
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 caccgactgt agggcctgtc cccagcccc aggactgccc accgtccacc 1150  
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 gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350  
 cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400  
 catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450  
 atttattctg ggaagatggt tttcaaactc agagacaagg acttttggtt 2500  
 ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550  
 aaaa 2555

<210> 69  
 <211> 598  
 <212> PRT  
 <213> Homo Sapien

<400> 69  
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu  
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 20 25 30  
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45  
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
 50 55 60  
 Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu  
 65 70 75  
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
 80 85 90  
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser  
 95 100 105  
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

				110					115					120
Ala	Leu	Arg	Leu	Ala 125	Gly	Leu	Gly	Leu	Gln 130	Gln	Leu	Asp	Glu	Gly 135
Leu	Phe	Ser	Arg	Leu 140	Arg	Asn	Leu	His	Asp 145	Leu	Asp	Val	Ser	Asp 150
Asn	Gln	Leu	Glu	Arg 155	Val	Pro	Pro	Val	Ile 160	Arg	Gly	Leu	Arg	Gly 165
Leu	Thr	Arg	Leu	Arg 170	Leu	Ala	Gly	Asn	Thr 175	Arg	Ile	Ala	Gln	Leu 180
Arg	Pro	Glu	Asp	Leu 185	Ala	Gly	Leu	Ala	Ala 190	Leu	Gln	Glu	Leu	Asp 195
Val	Ser	Asn	Leu	Ser 200	Leu	Gln	Ala	Leu	Pro 205	Gly	Asp	Leu	Ser	Gly 210
Leu	Phe	Pro	Arg	Leu 215	Arg	Leu	Leu	Ala	Ala 220	Ala	Arg	Asn	Pro	Phe 225
Asn	Cys	Val	Cys	Pro 230	Leu	Ser	Trp	Phe	Gly 235	Pro	Trp	Val	Arg	Glu 240
Ser	His	Val	Thr	Leu 245	Ala	Ser	Pro	Glu	Glu 250	Thr	Arg	Cys	His	Phe 255
Pro	Pro	Lys	Asn	Ala 260	Gly	Arg	Leu	Leu	Leu 265	Glu	Leu	Asp	Tyr	Ala 270
Asp	Phe	Gly	Cys	Pro 275	Ala	Thr	Thr	Thr	Thr 280	Ala	Thr	Val	Pro	Thr 285
Thr	Arg	Pro	Val	Val 290	Arg	Glu	Pro	Thr	Ala 295	Leu	Ser	Ser	Ser	Leu 300
Ala	Pro	Thr	Trp	Leu 305	Ser	Pro	Thr	Ala	Pro 310	Ala	Thr	Glu	Ala	Pro 315
Ser	Pro	Pro	Ser	Thr 320	Ala	Pro	Pro	Thr	Val 325	Gly	Pro	Val	Pro	Gln 330
Pro	Gln	Asp	Cys	Pro 335	Pro	Ser	Thr	Cys	Leu 340	Asn	Gly	Gly	Thr	Cys 345
His	Leu	Gly	Thr	Arg 350	His	His	Leu	Ala	Cys 355	Leu	Cys	Pro	Glu	Gly 360
Phe	Thr	Gly	Leu	Tyr 365	Cys	Glu	Ser	Gln	Met 370	Gly	Gln	Gly	Thr	Arg 375
Pro	Ser	Pro	Thr	Pro 380	Val	Thr	Pro	Arg	Pro 385	Pro	Arg	Ser	Leu	Thr 390
Leu	Gly	Ile	Glu	Pro 395	Val	Ser	Pro	Thr	Ser 400	Leu	Arg	Val	Gly	Leu 405



<400> 71  
cggttctggg gacgttaggg ctcg 24

<210> 72  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 72  
ctgcccaccg tccacctgcc tcaat 25

<210> 73  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 73  
aggactgcc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 74  
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75  
<211> 1077  
<212> DNA  
<213> Homo Sapien

<400> 75  
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ggcctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200  
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gccggctgca ggggacagga ggccccccc agaatgggga agggatatccc 350  
tggcagagtc tcccggagca gaggttccgat gccctggaag cctgggagaa 400

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 ccagggtggg tacatactgg agacagccaa gagctgagta tataaaggag 950  
 agggaatgtg caggaacaga ggcattcttc tgggtttggc tcccgttcc 1000  
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<210> 76  
 <211> 250  
 <212> PRT  
 <213> Homo Sapien

<400> 76  
 Met Pro Ala Ser Ser Pro Phe Leu Leu Ala Pro Lys Gly Pro Pro  
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 Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala  
 20 25 30  
 Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala  
 35 40 45  
 Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg  
 50 55 60  
 Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly  
 65 70 75  
 Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala  
 80 85 90  
 Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala  
 95 100 105  
 Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu  
 110 115 120

Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu
			125						130					135
Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala
			140						145					150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu
			155						160					165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln
			170						175					180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg
			185						190					195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser
			200						205					210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu
			215						220					225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro
			230						235					240
His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu					
			245					250						

<210> 77  
 <211> 2849  
 <212> DNA  
 <213> Homo Sapien

<400> 77  
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 ggggggggacc tgttgctgct cgtaccgccc cccaccctcc tcttctgcac 150  
 tgccgtcttc cggaagacct tttccctgc tctgttctct tcaccgagtc 200  
 tgtgcatcgc cccggacctg gccgggagga ggcttggccg gcgggagatg 250  
 ctctagggggc ggcgcgggag gagcggccgg cgggacggag ggcccggcag 300  
 gaagatgggc tcccgtggac agggactctt gctggcgtac tgctgtctcc 350  
 ttgcctttgc ctctggcctg gtctgagtc gtgtgccccca tgtccagggg 400  
 gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450  
 tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500  
 aggggctccc tgcttcccgg tgcttgcgct gctgtgacct cggtacctcc 550  
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caggctcagc agggggccagg ggccacactg gacccaaagg gcagaagggc 700  
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 ctaaaggtct caaaaggagc aaagtaaacc gtggaggaca aagaaaaggg 1550  
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 ctccccagc tctttccaga aaacattaaa ctcagaattg tgttttcaa 2849

<210> 78  
 <211> 281  
 <212> PRT  
 <213> Homo Sapien

<400> 78  
 Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu  
 1 5 10 15  
 Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val  
 20 25 30  
 Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser  
 35 40 45  
 Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr  
 50 55 60  
 Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg  
 65 70 75  
 Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro  
 80 85 90  
 Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly  
 95 100 105  
 Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

110	115	120
Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly		
125	130	135
Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val		
140	145	150
Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val		
155	160	165
Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met		
170	175	180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe		
185	190	195
Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His		
200	205	210
Ile Met Lys Asn Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val		
215	220	225
Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu		
230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg Leu Tyr Lys Gly Glu Arg		
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu Asp Thr Tyr Ile Thr Phe		
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr Glu Pro		
275	280	

<210> 79  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 79  
 tacaggccca gtcaggacca gggg 24  
  
 <210> 80  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 80  
 ctgaagaagt agaggccggg cacg 24  
  
 <210> 81

<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
cccgggtgctt gcgctgctgt gaccccggtg cctccatgta cccgg 45

<210> 82  
<211> 2284  
<212> DNA  
<213> Homo Sapien

<400> 82  
gcggagcatc cgctgcgggc ctcgccgaga cccccgcgcg gattcgccgg 50  
tccttcccgc gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100  
ggcgcggggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200  
gacaaaaact aaactgaaat ttaaaatggt cttcggggga gaaggagct 250  
tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300  
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gtcatctctt tctaaggga tcaaggcaa tgagcccgta tatacttcaa 400  
ctcaagaaga ctgcattaat tcttgctggt caacaaaaaa catatcaggg 450  
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500  
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ttgaccagaa atttgctaag ccaagagtta cccaggaag attctctctt 650  
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cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

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 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250  
 tatgtcaa at gtggagtctt ccactatgaa taaaactgct tcctgggaag 1300  
 gtagggaggc cagtccaggc agttcctccc agggcagtggt tccagaaaat 1350  
 cagtacggcc ttccatttga aaaatggctt cttatcgggt ccctgctctt 1400  
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 cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500  
 gggatctatg tggacatcta aggatggaac tcggtgtctc ttaattcatt 1550  
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgctagtctt 1600  
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 acacctgggt gatttttgta ttttttagtag agacgggggt tcaccatggt 1850  
 ggtcaggctg gtctcaaact cctgacctag tgatccaccc tcctcggcct 1900  
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 attttgggta atctgtctct aaaatattag ctaaaaaaaa agctctatgt 2050  
 aaagtaataa agtataattg ccatataaat ttcaaaattc aactggcttt 2100  
 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150  
 tgggtccaga taaaatcaac tgtttatatc aatttcta at ggatttgctt 2200  
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250  
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 83  
 <211> 431  
 <212> PRT  
 <213> Homo Sapien

<400> 83  
 Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile  
 1 5 10 15



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Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu		
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn		
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg		
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn		
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu		
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly		
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu		
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile		
425	430	

<210> 84  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 84  
 agggaggatt atccttgacc tttgaagacc 30

<210> 85  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 85  
 gaagcaagtg cccagctc 18

<210> 86  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 86  
 cgggtccctg ctcttttg 18

<210> 87  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 87  
caccgtagct gggagcgcac tcac 24

<210> 88  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 88  
agtgttaagtc aagctccc 18

<210> 89  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 89  
gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90  
<211> 957  
<212> DNA  
<213> Homo Sapien

<400> 90  
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cattccagat gcacccctgt ccagtgtgc ctatagcatc cgcagcatcg 150  
gggagaggcc tgcctcaaa gctccagtcc caaaaggca aaaatgtgac 200  
cactggactc cctgcccatac tgacacctat gcctacaggt tactcagcgg 250  
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tgggagaaca gctgggaaat gttgccagag gaataaacat tgccattgtc 350  
aactatgtaa ctgggaatgt gacagcaaca cgatgttttg atatgtatga 400  
aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450  
aatccctgct cttcatggtg acctatgacg acggaagcac aagactgaat 500



Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg
			170						175					180
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly
			185						190					195
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser
			200						205					210
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln
			215						220					225
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser					
			230						235					

<210> 92  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 92  
 aatgtgacca ctggactccc 20

<210> 93  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 93  
 aggcttgga ctccttc 18

<210> 94  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 94  
 aagattcttg agcgattcca gctg 24

<210> 95  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 95  
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 96  
ctcaagaagc acgcgtactg c 21

<210> 97  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 97  
ccaacctcag cttccgctc tacga 25

<210> 98  
<211> 18  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 98  
catccaggct cgccactg 18

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<223> Synthetic oligonucleotide probe

<400> 99  
tggcaaggaa tgggaacagt 20

<210> 100  
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